How Active are Georgians?

Georgia Physical Activity Report

Georgia Department of Human Resources
2001 Report on Physical Activity

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HighLights

- Regular physical activity reduces the risk of heart disease, high blood pressure, stroke, colon cancer, diabetes, falls and fractures.

- The currently recommended amount of physical activity for good health is 30 minutes of moderate intensity physical activity on at least five, and preferably all days of the week. The recommended 30 minutes can be done in 10-minute segments.

- Only one in four (24%) adult Georgians is regularly active.

- One in four (27%) adult Georgians is sedentary (no non-occupational physical activity).

- The proportion of adults who report being regularly active decreases with age, and increases with higher levels of education and income.

- Walking is the most commonly reported activity.

- Activity levels have declined over the past fifteen years.

- Insufficient physical activity was responsible for:
  - 5,543 deaths
  - 29,844 hospitalizations
  - $477 million in hospital charges

- Because some Georgians are physically active:
  - 6,107 deaths did not occur
  - 33,729 hospitalizations did not occur
  - $538 million in hospital charges were not incurred.

- Methods to promote physical activity need to be expanded to include environmental and policy supports.

- Environmental features and organizational policies designed to promote regular physical activity can occur in worksites, schools, healthcare settings and in other places.

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Chapter 1

About Physical Activity

Within the past several years the health benefits of regular physical activity have been affirmed and summarized in reports from governmental and non-governmental organizations. The Surgeon General of the United States[1], the National Institutes of Health (NIH)[2], the Centers for Disease Control and Prevention (CDC)[3], the American College of Sports Medicine[3], and the American Heart Association[4] have concluded that regular physical activity is associated with important health benefits and a higher quality of life in general. These benefits include reduced rates of heart disease, high blood pressure, diabetes, osteoporosis, colon cancer, anxiety, and decreases in the severity of depressive symptoms. Physical activity also helps people maintain healthy body weight, aids in the management of osteoarthritis, reduces the risk of falls and fractures, and enhances quality of life.

Regular physical activity reduces the risk and negative impact of:

- Heart disease
- High blood pressure
- Stroke
- Colon Cancer
- Diabetes
- Falls and Fractures

Regular physical activity helps with:

- Maintaining proper body weight
- Controlling osteoarthritis
- Reducing symptoms of depression and anxiety
- Enhancing quality of life

In addition to confirming and delineating the health benefits of physical activity, these governmental and non-governmental reports contain three important messages. First, the regularity of activity is more important than the intensity. Second, activity need not be limited to special exercise sessions but can be woven into the fabric of routine activities. Third, inactive individuals improve their health by becoming more physically active even if they do not reach the recommended levels.

REGULARITY

Regular physical activity at a moderate level, such as a brisk walk or raking the lawn, improves physical health. To achieve this benefit, regularity is more important than the intensity or strenuousness of the physical activity. Although the wording in the recommendations varies by organization, they all suggest that individuals accumulate at least 30 minutes of moderately intense physical activity on at least five, and preferably all, days of the week.

TEN-MINUTE SESSIONS

The recommended 30 minutes of physical activity does not need to take place all at once. It may be more feasible to break up the 30 minutes into 3 ten-minute sessions throughout the day. Some examples of ten-minute sessions include parking your car farther rather than closer to your destination, getting off public transportation a few stops early, and taking a ten-minute walk after lunch.

EVERY INCREASE HELPS

The benefits of physical activity vary depending on the frequency and duration of physical activity. The current recommendation of 30 minutes of moderate-intensity physical activity at least five days a week is not a rigid threshold. For people who are already meeting this goal, adding more time or increasing the intensity of the activity will bring added benefit. For less active people, a little more physical activity improves their health and quality of life even if they do not fully achieve the recommended goal.

PHYSICAL ACTIVITY, EXERCISE, AND PHYSICAL FITNESS

In everyday speech, physical activity, exercise, and physical fitness are commonly used interchangeably. However, there are important differences in the meanings of these terms.[5] Physical activity is any bodily movement produced by skeletal muscles that results in energy expenditure. The purpose of the

movement may be related to occupation, household chores, transportation, sports, hobbies, or any other pursuit. Exercise is the part of physical activity that is planned, structured, repetitive, and is usually done to improve or maintain fitness. Physical fitness is a set of attributes or skills that describes a person's ability to perform and sustain physical activity, such as cardiovascular endurance, flexibility, and strength. Physical fitness is dependent upon both heredity and behavior. Genetic endowment cannot be changed, but physical activity behaviors, on the other hand, can be changed.

HEALTHY PEOPLE 2010

Healthy People 2010 (HP 2010) is a document published by the US Department of Health and Human Services. The document contains goals and objectives to guide the efforts of health workers over the next decade. This report provides information about Georgia's status in accomplishing many of the Healthy People 2010 objectives related to physical activity and fitness. At this point, Georgia has collected and analyzed data pertaining to six of HP 2010's fifteen physical activity related objectives. Information will be presented on the proportions of adults engaging in no leisure time physical activity (objective 22-1), in regular physical activity (objective 22-2), and vigorous physical activity (objective 22-3). Information on the proportion of adults performing activities which enhance muscle strength (objective 22-4), the proportion of schools that require daily physical education (objective 22-8), and proportion of children who walk to school (objective 22-14b) will also be provided.
(For a complete list of the physical activity related objectives, see Appendix I)

PURPOSE OF THIS REPORT

This report includes information about the physical activity patterns of Georgians, the costs of inactivity, and suggestions for future actions.

Chapter 2 describes current patterns of physical activity in Georgia, including the prevalence of regular physical activity, changes over time, differences between counties, and differences between groups of people based on their age, race, sex, and other characteristics. Chapter 3 estimates the cost in lives, hospitalizations, and hospital charges due to inactivity. In addition, it also estimates the savings in lives, hospitalizations, and hospital charges incurred by Georgians who are physically active. Chapter 4 suggests strategies to make it easier for people to be physically active. Chapter 5 describes projects and programs that have made progress in promoting and facilitating physical activity in Georgia, and that provide resourceful information and assistance.

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[1]U.S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General. Atlanta*, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996.

[2]NIH Consensus Development Panel on Physical Activity and Cardiovascular Health. (1996) Physical Activity and Cardiovascular Health. JAMA 1996;276:241-246.

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Chapter 2

How Active are Adult Georgians?

AMONG ADULTS IN GEORGIA:

- Nearly one in four (24%) is regularly active
- Just less than half (49%) are irregularly active
- Approximately one-fourth (27%) are inactive
- Those living in southwest Georgia are more likely to be regularly active than those living elsewhere in the state
- Women and men are equally likely to be regularly active
- People 65 years of age and older are the least likely to be regularly active
- The proportion of adults who report that they are regularly active increases with increasing levels of education and income
- Walking is the most commonly reported activity
- Activity levels have declined over the past 15 years

STUDY DESIGN

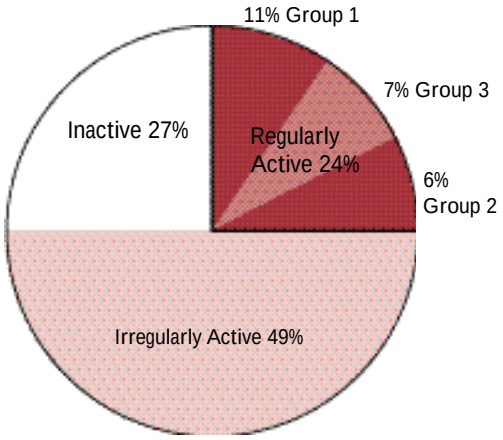
The results presented in this report are based on data from the Georgia Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS collects information regarding health-related behaviors such as smoking, diet, and physical activity through a telephone survey of a representative sample of the state's civilian, non-institutionalized adult population more than 17 years of age. Georgia has conducted the BRFSS every year since 1984[1]. Telephone interviews are conducted throughout the year during both the daytime and evening hours. In 1999 a total of 2273 adults in Georgia were interviewed.

The BRFSS physical activity questions focus on non-occupational activities such as sports, conditioning, and recreational pursuits (See Appendix IV for more information on the BRFSS). To describe physical activity patterns in Georgia, respondents were classified into three categories (Table 2-1): Regularly active adults include those who either a) were active 5 or more days per week and accumulated 150 minutes or more of moderate physical activity, or b) did 20 minutes or more of vigorous physical activity on 3 or more days per week. Irregularly active adults include those who performed some moderate or vigorous physical activity but do not meet the criteria reported above for regularly active persons. Inactive adults include those who reported no participation in non-occupational physical activity during the past 30 days.

Table 2-1 Classification of activity levels

REGULARLY ACTIVE
• 5 or more days a week for a total time of 150 minutes or more (see Healthy People 2010, recommendation 22-2)
or
• 3 or more days a week of vigorous activity for 20 minutes or more each session (see Healthy People 2010, recommendation 22-3).
IRREGULARLY ACTIVE
• Persons who report some moderate or vigorous activity, but are not regularly active.
INACTIVE
• Persons who report no non-occupational physical activity in the past 30 days (see Healthy People 2010, recommendation 22-1).

Figure 2-1 Classification of activity levels

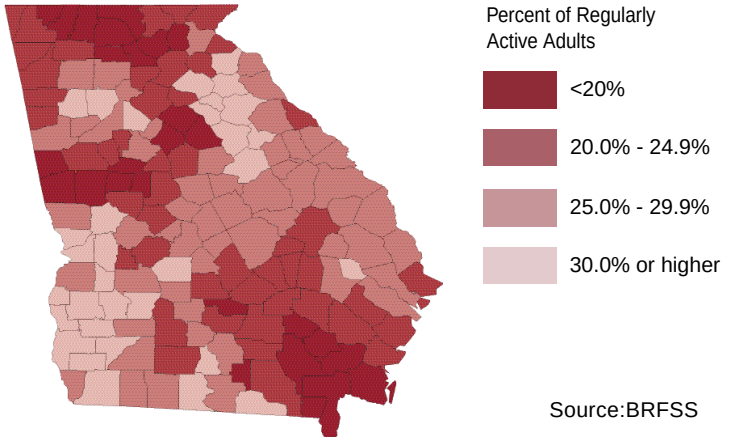


Group 1 (11%) = moderate intensity physical activity for 30 minutes per day at least 5 days per week (HP 2010,objective 22-2)

Group 2 (6%) = vigorous intensity physical activity for 20 minutes per session at least 3 days per week (HP 2010,objective 22-3)

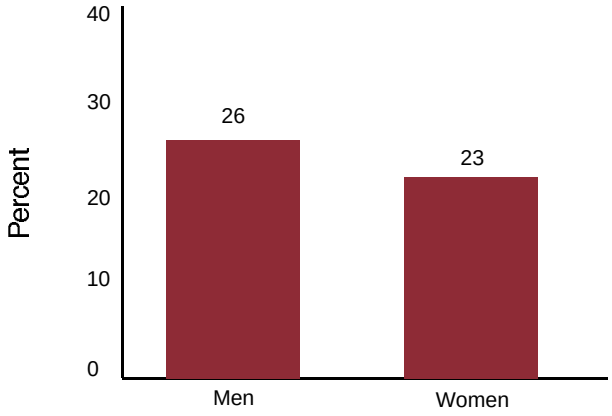
Group 3 (7%) = satisfies criteria for both group 1 and group 2

Figur e 2-2. Regularl y active adults by county, Georgia, 1994, 1996, 1998, 1999



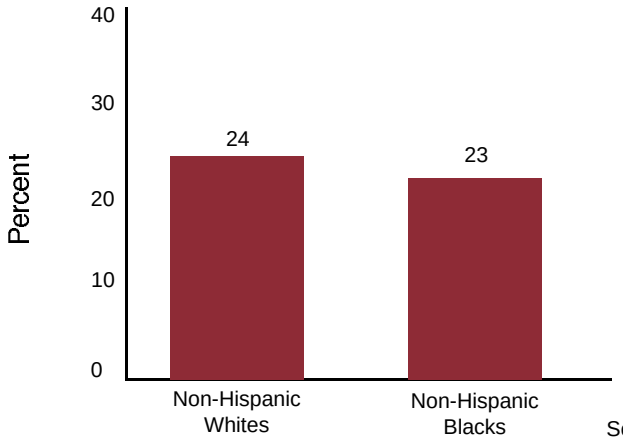
Source:BRFSS

Figur e 2-3. Regularl y active adults by gender , Georgia, 1999



Source:BRFSS

Figur e 2-4. Regularl y active adults by race/ethnicity , Georgia, 1999



Source: BRFSS

Table 2-2 Activities reported by Georgians, 1999

ACTIVITY	%
Walking	38
Indoor conditioning activities	17
Recreational activities	17
Jogging	10
Home maintenance activities	6
Team sports	6
Water or snow activities	2
Racquet sports	2

RESULTS

In 1999, 24% of adults in Georgia reported that they were regularly active, 49% reported that they were irregularly active, and 27% reported that they were inactive. Among those who were classified as regularly active, 18% were active 30 minutes a day for five or more days per week, while 13% were vigorously active for 20 or more minutes at a time. (Figure 2-1) [note: 7% of adults contribute to both categories of regular activity]. Georgians who live in the southwest region of the state were more likely to report being active than those living elsewhere (Figure 2-2). The percent of regularly active adults was similar for men and women (Figure 2-3), as well as for persons of different race (Figure 2-4). The proportion of adults who reported being regularly physically active decreased significantly with age (Figure 2-5). At the same time, the proportion of adults who reported regular physical activity increased with increasing levels of education and income. However, these observed increases can be partially explained by the decrease in the average ages of those people who make up the education and income categories. (Figures 2-6 and 2-7). Persons living in urban areas

did not report being regularly active significantly more often than those living in rural areas (Figure 2-8).

Walking was the most popular activity reported by Georgians (Table 2-2). Participation in walking and home maintenance activities increased with increasing age, whereas, participation in jogging and team sports decreased with increasing age (Figure 2-9).

Since 1984, the proportion of adults, in Georgia, who are regularly active has declined, while the proportion who are regularly inactive has increased (Figure 2-10).

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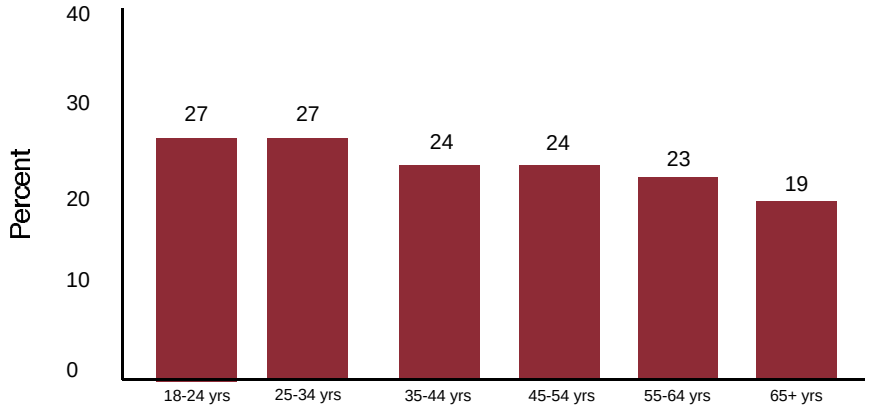
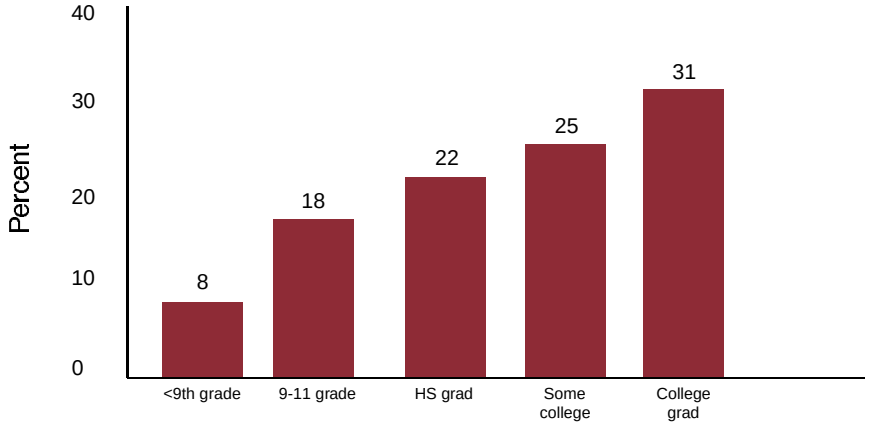
Figure 2-5. Regularly active adults by age group, Georgia, 1999



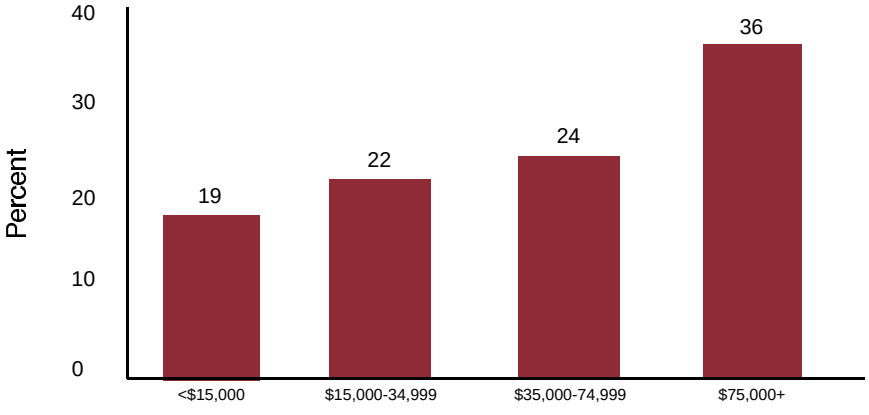
Source: BRFSS

Figure 2-6. Regularly active adults by years of education, Georgia, 1999



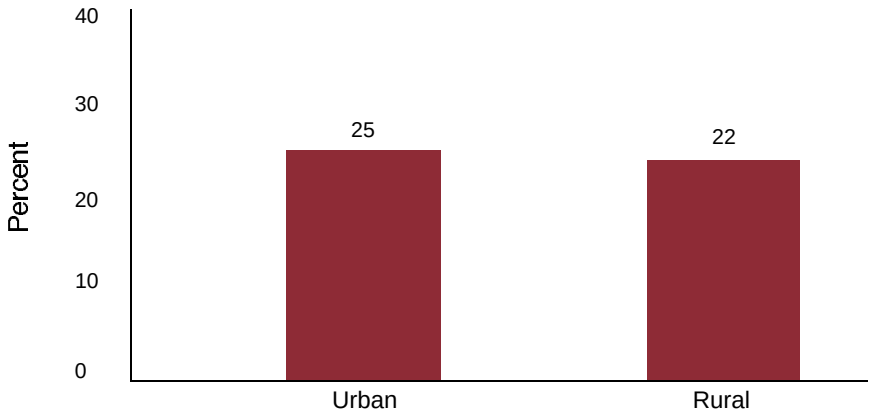
Source: BRFSS

Figure 2-7. Regularly active adults by household income, Georgia, 1999



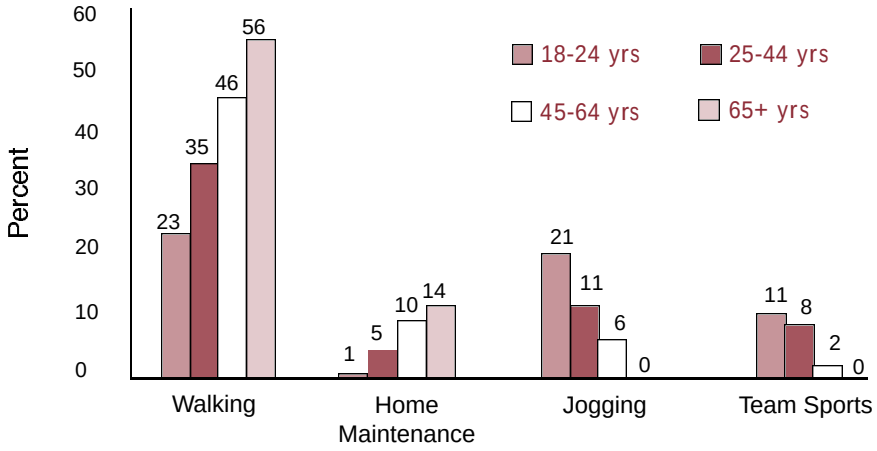
Source:BRFSS

Figure 2-8. Regularly active adults by urban/rural residence, Georgia, 1999



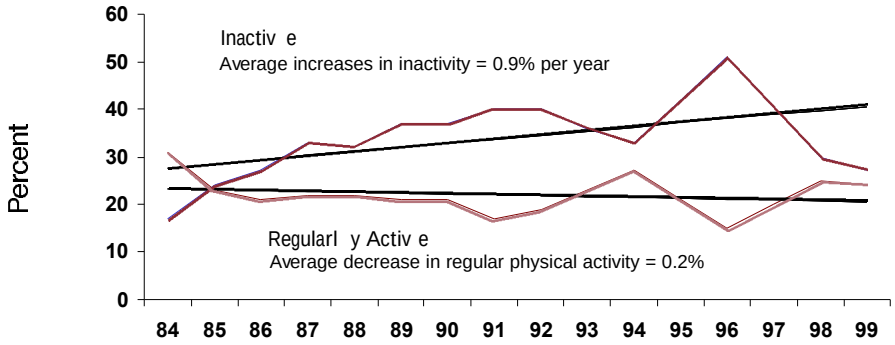
Source: BRFSS

Figure 2-9. Participation in selected types of activities by age group, Georgia, 1999



Source: BRFSS

Figure 2-10. Physical activity practices of adults, Georgia, 1984-1999



Source:BRFSS

Chapter 3

- Burden of Inactivity
- Benefit of Activity

In 1999, in Georgia, lack of regular physical activity caused an estimated:

- 32% of all cases of heart disease
- 18% of all cases of high blood pressure
- 32% of all cases of stroke
- 32% of all cases of colon cancer
- 18% of all cases of diabetes
- 32% of all cases of osteoporotic falls with fractures

In 1999, combining the deaths, hospitalizations, and hospital charges for these six medical problems, insufficient physical activity was responsible for an estimated:

- 5,543 deaths
- 29,844 hospitalizations
- $477 million in hospital charges

On the other hand, 24% of Georgians were regularly active and another 49% were irregularly active. Had these persons not been active, this would have resulted in an additional:

- 6,107 deaths
- 33,729 hospitalizations
- $538 million in hospital charges

Physical activity reduces the risk of heart disease, high blood pressure, colon cancer, and non-insulin dependent diabetes mellitus. [1-3] In addition, evidence supporting the beneficial effects of physical activity on certain subtypes of stroke has accumulated in recent years. [4,5,6,7] Finally, physical activity also reduces the risk of falls and fractures among the elderly, reduces problems with osteoarthritis and low back pain, and improves the overall quality of life. Methods are available to estimate the burden of physical inactivity and determine approximately how many people died or were hospitalized because of physically inactive and irregularly active lifestyles. Methods are also available to estimate the benefits related to physical activity and determine approximately how many additional people would have died or have been hospitalized if everyone were inactive. The burdens and benefits related to physical activity are represented for six conditions: heart disease, high blood pressure, stroke, colon cancer, non-insulin dependent diabetes mellitus, and osteoporotic fractures from falls (see Appendix for description of methods used to arrive at these estimates).

The Burdens: Preventable deaths, hospitalizations, and hospital charges

Physically inactive and irregularly active lifestyles result in health and economic burdens that are potentially avoidable if everyone becomes regularly active. This burden resulting from physically inactive and irregularly active lifestyles can be estimated based upon the health risks for inactive lifestyles and the proportion of inactive and irregularly active people in Georgia. These estimates, called the Population Attributable Risk (PAR), provide a useful measure of the burden of lack of regular physical activity on the health of the population. PAR estimates suggest that if all Georgians were regularly active, there would be approximately 32% fewer people with coronary heart disease, 18% fewer people with high blood pressure,

Table 3-1. Estimated burdens of inactive and irregularly active lifestyles, Georgia, 1999

Condition	PAR	Deaths		Hospitalizations		Hospital Charges [1] (millions)	
		Actual	Avoidable	Actual	Avoidable	Actual	Avoidable
Heart Disease	32%	10,502	3,360	46,566	14,901	$851	$272
High blood pressure	18%	1,270	228	7,693	1,384	$73	$13
Stroke	32%	4,277	1,368	23,513	7,524	$325	$104
Colon cancer	32%	971	311	2,350	752	$55	$18
Diabetes	18%	1,472	265	12,624	2,272	$121	$22
Osteoporotic falls & Fractures	32%	35	11	9,412	3,011	$150	$48
TOTAL			5,543		29,844		$477

PAR = Population Attributable Risk:the percent reduction if all Georgians were regularly active • [1] Rounded to the nearest $1 million

32% fewer people with stroke, 32% fewer people with colon cancer, 18% fewer people with diabetes, and 32% fewer people with osteoporotic falls with fractures.

Based on the PAR for heart disease, hypertension, stroke, colon cancer, diabetes, and osteoporotic falls and fractures, the avoidable deaths, hospitalizations, and hospital charges attributable to inactive and irregularly active lifestyles in 1999 are presented in Table 3-1. If all Georgians became regularly active, there would be an estimated 5,543 fewer deaths, 29,844 fewer hospitalizations, and $477 million fewer hospital charges due to these conditions.

The Benefits: Prevented deaths, hospitalizations, and hospital charges

The additional deaths, hospitalizations, and hospital charges that theoretically would have happened if all Georgians were inactive but were prevented because some persons were either regularly or irregularly active are called the Population Events Prevented (PEP). The PEP is an estimated figure and, like the PAR, is not precise. Nevertheless, it is important to note that some Georgians are in better health because they are physically active, and that these health benefits lead to reductions in deaths, hospitalizations, and hospital charges.

If all Georgians were inactive, then there would have been approximately 36% more people with coronary heart disease, 21% more people with high blood pressure, 36% more people with stroke, 36% more people with colon cancer, 21% more people with diabetes, and 36% more people with osteoporotic falls with fractures than the number actually observed. For the six conditions combined, an estimated additional 6,107 deaths, 33,729 hospitalizations, and $538 million in hospital charges did not occur (Table 3-2).

Table 3-2. Estimated benefits from regularly active and ir regularly active lifestyles, Georgia, 1999

Condition	PEP	Deaths		Hospitalizations		Hospital Charges[1] (millions)	
		Actual	Avoided	Actual	Avoided	Actual	Avoided
Heart Disease	36%	10,502	3,780	46,566	16,764	$851	$306
High blood pressure	21%	1,270	267	7,693	1,615	$73	$15
Stroke	36%	4,277	1,540	23,513	8,465	$325	$117
Colon cancer	36%	971	204	2,350	846	$55	$20
Diabetes	21%	1,472	309	12,624	2,651	$121	$26
Osteoporotic falls & Fractures	36%	35	7	9,412	3,388	$150	$54
TOTAL			6,107		33,729		$538

PEP = Population Events Prevented:the percent increase if all Georgians were inactive • [1] Rounded to the nearest $1 million

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Chapter 4

New Strategies for Promoting Physical Activity

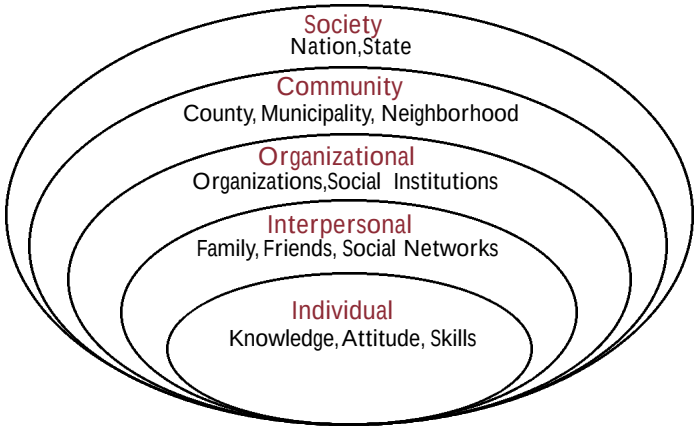
Most physical activity-related health promotion programs teach individuals about the benefits of physical activity and how to select, begin, and maintain participation in physical activity. The programs commonly include information about how to do specific activities, how to fit exercise into your schedule, how to find an exercise partner, and other tips on overcoming barriers that inhibit regular physical activity. The programs focus on individuals and things that individuals can do to help themselves become more active. Research has shown that individual-oriented health promotion programs have had some success in helping people become more physically active. In spite of this success, the proportion of people in the United States who are regularly active is lower than the proportion of adults who are irregularly active or inactive. In Georgia, the proportion of people who are regularly active has been declining while the proportion who are inactive has been increasing. It is apparent that individually focused educational efforts are, by themselves, not enough to help all irregularly active and inactive Georgians become more active.

ENVIRONMENT AND POLICY

One promising approach to increasing physical activity is to make it easier for people to be active. This includes changing the environment in which activity occurs and modifying or creating organizational policies that affect the environment and peoples' behavior. Focusing attention on the environment acknowledges that there are certain barriers that individuals cannot control. For example, individuals may want to walk more but they are unable to do so because there are no sidewalks, the traffic is dangerous, or the walking path is not well lit. Other people may want to bicycle to work, but have neither a safe place to store a bicycle at their worksite nor the facilities to shower and change clothing. Still other people may prefer to climb a flight of stairs rather than wait for an elevator but the stairwells are unattractive, potentially unsafe, or difficult to find. Too often, the environment makes it difficult to participate in regular physical activity. Efforts to make the environment more supportive will aid the promotion of regular physical activity.

Methods used to promote regular physical activity need to be expanded to include environmental and policy supports. Behaviors regarding physical activity are influenced on multiple levels (Figure 4.1).[1] Beyond the individual level, behavior can be influenced by interpersonal variables as well as factors associated with organizations, communities, and societies. To increase the effectiveness and impact of health promotion programs, the influence of each of these levels must be incorporated into the intervention strategy, regardless of where the intervention takes place. In the past, the individual and interpersonal levels were often the exclusive focus of health education programs. However, expanding an intervention's scope to include several levels increases the overall impact and effect on the intervention.

Figure 4-1. Socio-Ecological Model



For example, schools should not only instruct students about the benefits of physical activity, but also make changes at the organizational level, such as maintaining optimal physical features including playgrounds, playing fields, tracks, and gymnasiums and ensuring that they are accessible after regular school hours. In addition, parents and concerned community members can become involved by collaborating with the school on physical activity efforts and by working with state and local school boards and legislators to mandate recess and daily physical education. Such efforts help develop positive attitudes toward physical activity and create an environment and social climate that support and foster physical activity.

The following are further examples of environmental features and organizational policies designed to promote regular physical activity. Examples are categorized by venue and include general community, worksites, health care settings, and schools.

GENERAL COMMUNITY

Environmental Features

- Safe contiguous sidewalks (adequate lighting, pedestrian crossing signals, and curb ramps) in residential and business areas[2,3]
- Road space for bicyclists in the form of marked bicycle lanes, wider outside lanes, and paved shoulders[3]
- Downtown centers restricted to foot and/or bicycle travel[2,4]
- Safe, attractive, accessible pools, tennis courts, and other sport facilities with convenient hours of operation[5]
- Safe, attractive, accessible hiking, biking, and fitness trails[5]
- Safe, attractive, accessible community centers, parks, and play areas[5]


Photo by:Mark Fenton

Policies

- Zoning regulations requiring new developments to include green space for recreational facilities[2,6]
- Zoning regulations requiring new developments to include safe and attractive walking and biking pathways to be used for transportation[2,6]
- Building ordinances requiring convenient and attractive stairways[2]
- Use of highway funds to support alternative forms of transportation (walking, bicycling, mass transit)[6]
- Incentives to malls to allow mall walking programs[2,6]
- Incentives for converting abandoned railway beds to walking, jogging, or bicycling pathways[2,6]
- Incentives to individuals to encourage walking, bicycling, or taking mass transit to work[2]
- Support of local physical activity events through the contribution of public space, as well as police and emergency medical services by cities/towns[6]
- Incentives to real estate developers to build retail centers and housing developments that are pedestrian friendly, i.e. building store fronts next to sidewalks and parking lots behind stores, building housing developments close to restaurants, retail, and other entertainment venues[2]
- Organization and coordination of community watch groups to increase safety[2]

WORKSITE

Environmental Features

- On-site shower and changing rooms for employees who bicycle or walk to work or engage in other physical activity during the work day[5]
- Safe and attractive walkways from distant parking lots[2,6]
- Safe, accessible, and attractive staircases[2,6]
- On-site exercise facilities or exercise classes[5]
- Walking, jogging, bicycling paths connecting to the worksite and bicycle parking areas[3]

Policies

- Flex time or work breaks specifically for activity[2,5,6,7]
- Incentives or subsidies for fitness memberships[5,8]
- Incentives or subsidies for walking, bicycling, or taking mass transit to work[2]
- Incentives for adopting and maintaining a physically active lifestyle[8,9]
- Health insurance discounts to regularly active employees[2,8]
- Sponsorship of employee teams in local leagues or events

Photo by:Mark Fenton

HEALTH CARE SETTING

Environmental Features

- Provision of educational materials to patients and posting of signs that promote physical activity in exam and waiting rooms

Policies

- Assessment and counseling of all patients about their physical activity practices should be identified as a minimum standard of care[10]
- Reimbursement of health care providers for assessment and counseling about physical activity[2,6,10]
- Provision of periodic training updates on physical activity for health care providers[2,11]
- Provision of continuing interventions with multiple components, such as supervised exercise, provision of equipment, and behavioral approaches[10]
- Worksite wellness programs for staff

SCHOOL

Environmental Features

- Walking, jogging, and bicycling paths to school grounds[3]
- Safe spaces, facilities, and equipment for interscholastic and intramural sports[12]
- Schools located within neighborhoods allowing students to walk or bicycle to school[8]

Policies

- Daily quality physical education[2,5,8,13]
- Certification of Physical Education. and Health Education instructors[13,16]
- Lifetime physical activity skills included in daily physical education[2,4,5,7,13]
- Health benefits of physical activity included in health education curricula[2,6]
- Access to school physical activity spaces outside of normal school hours[5,8]
- Extracurricular competitive and non-competitive physical activity opportunities for students of all skill levels, including disabled students[2,13]
- Extended hours when school recreational facilities are open to students and the community[7,14]
- Running tracks, ball fields, and other facilities open to the public during summers, evenings, and weekends[2,6,15]
- Recruitment of parental involvement in school-based physical activity efforts[13,16]
- Increase efforts to institutionalize programs shown to be effective, so that they are a routine part of school programs, policies, and resource allocations[15]
- Incorporating physical activity and wellness message within other academic curriculum.

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Chapter 5

Examples & Resources for Promoting Physical Activity in Georgia

The examples of community programs to facilitate physical activity in Georgia in the following list may provide ideas and encouragement to those seeking to implement programs. The following points should be kept in mind:

- The list comprises programs and projects known to the Division of Public Health. It is not the result of a systematic search and many excellent programs assuredly are missing. If you know of a program that should be included in future listings please complete and submit the form at the back of this report.
- The list provides examples; it is not intended to be an endorsement by the Division of Public Health. The programs listed have not been formally evaluated.

COMMUNITY

PROGRAM NAME AND CONTACT INFORMATION	TARGET GROUP	PROGRAM GOAL	PROGRAM ACTIVITIES/DESCRIPTION
Atlanta Bicycle Campaign (ABC) Dennis Hoffarth P.O. Box 5525 Atlanta, GA 31107 (404) 881-1112 e-mail: atlantabike@mindspring.com website: www.atlantabike.org	All Atlanta residents	Provide a safe environment for bicyclists and to promote bicycle transportation	A grass roots organization involved with the regional transportation planning process.
Bike Athens Jason Henderson P.O. Box 344 Athens, GA 30603 website: www.BikeAthens.com	Residents of Athens and Clarke Counties	Decrease motor vehicle use by enabling bike transportation	Bike racks placed on city buses and streets. Bike lanes added to downtown streets.
Balance and Strength Improvement Clinic (B.A.S.I.C.) Kathy Hayter Wellstar Health System Health Place & Mobile Health Services 65 S. Medical Drive Marietta, GA 30060 (770) 792-5431 email: kathy.hayter@wellstar.org	Seniors	Increase strength and balance in older persons at risk for falls	Visits include gentle, supervised activity such as marching, chair exercises, balance training, resistance exercises, arm movements, and stretching. Participants meet twice a week. Every sixth visit includes balance testing.
Cardiovascular Disease Prevention Initiative (CVD-PI) Pam Wilson CVD-PI Program Manager, Division of Public Health Georgia Department of Human Resources 2 Peachtree Street, 16th Floor Atlanta, GA 30303 (404) 657-6629 email: pswilson@dhr.state.ga.us	All Georgians, with particular emphasis given to racial and ethnic minorities whose rate of cardiovascular disease is greater than that of white Americans	Increase opportunities for physical activity and healthy eating through policy and environmental changes	Partnerships formed with public and private organizations; create a statewide strategic plan; assesses infrastructure for supporting change; trains district public health staff and partners.
Cardiovascular Disease Prevention Project - Unity Park Anne Wheeler, Nutritionist Southeast Health Unit Annex 1115 Church Street Waycross, GA 31501 (912) 287-6521 email: aswheeler@gdph.state.ga.us	Residents in neighborhood surrounding Unity Park, Coffee County, GA.	Increase use of the park by families for walking, basketball, biking and playing.	Park improvement includes repairing sidewalks, joining disconnected sidewalks, adding mile-marker signs to walking trails, repairing playground equipment and the addition of crosswalks.

PROGRAM NAME AND CONTACT INFORMATION	TARGET GROUP	PROGRAM GOAL	PROGRAM ACTIVITIES/DESCRIPTION
Fit Kids Alice Smith Children's Healthcare of Atlanta 1584 Tullie Circle NE Atlanta, GA 30329 (404) 250-2348 email: alice.smith@choa.org	Overweight youth, ages 6-12 and families	Improve diet, increase physical activity and enhance self esteem	Health education and exercise program for children and parents. Eight-week class sessions held at Children's Healthcare of Atlanta, or occasionally at neighborhood health center facilities, Parks and Recreation Centers or YMCA's.
Gateway Village Ben Mance 1500 Morrow Road Morrow, GA. 30260 (770) 961-4002 website: www.gatewayvillage.org	Citizens of Gateway Village	Promote non-motorized vehicle transportation	Connects a college campus, nature preserve, and a mixed-use development via bike trails and pedestrian friendly roadways
Georgia Coalition for Physical Activity and Nutrition (G-PAN) Michelle Lombardo, Chair 3838 Song River Road Duluth, GA 30097 email: wellness@abraxis.com	Georgians of all ages	Promote physical activity and nutrition to prevent chronic disease	A coalition comprised of over 200 individual members and about 80 organizations. Activities include the Take Charge of Your Health Campaign.
Georgia Golden Olympics (Georgia Golden Games, Inc) Vicki Pilgrim Health Promotion Branch Division of Public Health Department of Human Resources 2 Peachtree Street, 16-462 Atlanta, GA 30303 (404) 657-6644 email: vcpilgrim@dhr.state.ga.us	Adults 50 years and older	Maintain and improve health and well being of adults. Create an interest in lifetime sports and physical activity	Multi-sport events held at various locations around the state. Competitions are offered in individual and team sports. Statewide event held annually.
Georgia Striders Vicki Pilgrim Division of Public Health Department of Human Resources Health Promotion Branch 2 Peachtree Street, 16-462 Atlanta, GA 30303 (404) 657-6644 email: vcpilgrim@dhr.state.ga.us	Adults	Encourage walking clubs and individual walking programs	Support materials distributed including information about the benefits of walking, log books, and wall posters. Groups can be formed at churches, malls, senior centers, recreation departments, neighborhoods and other locations.
Hamilton Walkers at Walnut Square Mall Hamilton Medical Center 1200 Memorial Drive Dalton, GA 30720 (706) 272-2342 [Note:Similar programs exist across Georgia. Local information on Mall Walking Programs may be available through local malls or hospitals]	Adults	Facilitate walking	Mall walking program plus periodic health classes at the mall and monthly health screening and information.
Kids on the Move Alice Smith Children's Healthcare of Atlanta 1699 Tullie Circle Atlanta, GA 30329 (404) 417-5672 email: alice.smith@choa.org	Youth, ages 8-12, metro Atlanta	Reduce risk factors for heart disease and stroke	Eight-week health education and fitness program offered after school at elementary schools and recreation centers.

PROGRAM NAME AND CONTACT INFORMATION	TARGET GROUP	PROGRAM GOAL	PROGRAM ACTIVITIES/DESCRIPTION
Kingdom Kids Fitness Kenneth Law 6961 Wind Run Way Stone Mountain, GA 30087 (770) 465-1703 email: trainupachild226@aol.com	Youth of all ages, Atlanta suburb	Improve physical health and self-esteem	Activities include playing games and sports, teaching health education and Christian principles.
PATH Foundation Ed McBrayer P.O. Box 14327 Atlanta, GA 30324 e-mail: pathf@ix.netcom.com website: www.pathfoundation.org	Residents of Atlanta	Provide Atlantans with safe place to bike, run, walk, and skate	Constructed 65 miles of greenway trails. Plans to build trails linking neighborhoods and business centers with the Metro Area Regional Transportation Authority (MARTA).
Pedestrians Educating Drivers on Safety (PEDS) Sally Flocks 1447 Peachtree Street, Suite 801 Atlanta, GA 30309 (404) 873-5667 e-mail: info@peds.org website: www.peds.org	Residents of Atlanta	Make metropolitan Atlanta safe and accessible for all pedestrians	Grassroots advocacy group working to change legislation and policies regarding neighborhood design.
Senior Walking Club/Senior Line Dancing Club Many programs exist in Georgia. Contact local Departments of Recreation or local senior centers.	Seniors	Provide venue and opportunities for seniors to be active	Senior Walking Clubs walk at various locations and meet periodically for social events where incentives and refreshments are offered. Senior Line Dancing Clubs practice and perform on a regular basis.
Strategies for Metropolitan Atlanta's Regional Transportation and Air Quality (SMARTRAQ) Dr. Larry Frank College of Architecture Georgia Institute of Technology Atlanta, GA 30332 e-mail: larry.frank@arch.gatech.edu website: http://transaq.ce.gatech.edu/smartraq/	Atlanta Communities	Studies relationship between community design and modes of transportation	Conducts research to guide decisions about transportation, land use and community design. Emphasizes public health aspects of transportation and community design.
The Silver Comet Trail Steve Henry Metro Atlanta District of Transportation 5025 New Peachtree Rd. NE Chamblee, GA 30341-3195 (770) 986-1001 email: stephen.henry@dot.state.ga.us	Georgians of all ages	Provide a 57 mile long trail for use by foot or bicycle	Georgia Department of Transportation used money from the Transportation Equity Act to develop trails along old railway.
Walk-A-Weigh University of Georgia Georgia Cooperative Extension Service 203 Hoke Smith Annex Athens, GA 30602 (706) 542-0541	Adults	Decrease mortality due to obesity and heart disease through physical activity and healthy eating	Long-term behavior modification program to help people lose weight. Classes are offered to communities following needs assessments. Classes are often held in collaboration with local hospitals or health departments.

PROGRAM NAME AND CONTACT INFORMATION	TARGET GROUP	PROGRAM GOAL	PROGRAM ACTIVITIES/DESCRIPTION
Walking Trail, Taylor County Randy Frazier Taylor County Department of Parks and Recreation P.O. Box 278 Butler, GA 31006 (478) 862-9047 [Note: Trails such as this exist in many GA counties. Local information on trails such as these may be obtained from local Departments of Parks and Recreation]	Residents of Butler and Taylor County	Provide a safe setting for community members to be physically active	The walking trail/track was built with funds from a local 1% sales tax targeted towards various community projects. The trail is lighted so walkers can use it at night. A children's play area is located in the middle of the track.

SCHOOLS

PROGRAM NAME AND CONTACT INFORMATION	TARGET GROUP	PROGRAM GOAL	PROGRAM ACTIVITIES/DESCRIPTION
National Walk Our Children to School Day Partnership for a Walkable America Harold Thompson 1121 Spring Lake Drive Itasca, IL 60143-3201 (800) 621-7615 ext. 2383 website: www.walktoschool.org	Children in elementary and middle schools	Improve safety and opportunities for walking	Parents and other volunteers walk with children to school. As a part of this annual event, parents and children assess the safety and walkability of their routes to school.
The Organ Wise Guys© Michelle Lombardo, Chair 3838 Song River Road Duluth, GA 30097 email: ORGANWISE@aol.com website: www.organwiseguys.com	Youth, grades K-5	Help children create and maintain healthy lifestyles	Interactive health education focusing on nutrition and regular physical activity.
Take 10!™ The International Life Sciences Institute Brenda Moore 2295 Parklake Drive, Suite 450 Atlanta, GA 30345 (770) 934-1010 email: bmoore@ilsi.org	Youth, grades 4-6	Incorporate physical activity into the school day	Academic instruction is supplemented with 10-minute segments of moderate to vigorous activity. Activities are cross-referenced to the Georgia core curriculum.
Tri-County Chronic Disease Prevention Initiative Candice Y. Brooks 811 Hemlock Street Macon, GA 31201 (478) 751-6037 email: cybrooks@gdph.state.ga.us	Youth, grades 6-8	Increase students' knowledge of the importance of regular physical activity and nutrition in the prevention of future chronic illnesses and establish policies to support enhanced physical activity in school setting.	Enhanced P.E. curriculum, which includes alternative activities such as aerobics and dance.

WORKSITE

PROGRAM NAME AND CONTACT INFORMATION	TARGET GROUP	PROGRAM GOAL	PROGRAM ACTIVITIES/DESCRIPTION
Coastal Health District Employee Fitness Program Marsha Pierce 1609 Newcastle St. Brunswick, GA 31520 (912) 264-3907	Employees of Coastal Health District	Assist and motivate employees to improve their health and reduce risk factors for chronic disease	Incentives provided for milestone hours of physical activity; health risk assessments and health education materials from the American Heart Association provided.
Fulton County Employee Fitness Program Charsie Herndon Fulton County Government Center 141 Pryor St., 4th floor Atlanta, GA 30303 (404) 730-7080 email: fitness.thinner@mayo.co.fulton.ga.us	Employees of Fulton County Government	Promote health and fitness	Fitness training and counseling in the areas of aerobics, flexibility, muscular strength, endurance/stamina, weight loss, and nutrition.
Onsite Health Fitness Program King and Prince Seafood Corporation Connie Howell, RN Occupational Health Nurse 7 King and Prince Blvd. Brunswick, GA 31521 (912) 265-5155 ext. 701	Employees of King and Fish seafood processing plant	Reduce the risk factors for mental and physical health problems	Walking club; weight-loss program; nutrition education; stress management and health classes offered on regular basis.
Take Charge Challenge Bruce Leonard 809 Mill Bend Drive Lawrenceville, GA 30044 (770) 978-3821 email: be10@gateway.net	Worksites, schools, faith communities, other group settings	Increase physical activity and cause sustainable behavior change	10-week incentive based physical activity program where participants set a physical activity goal to be met by the completion of the program.

If you would like us to consider your physical activity promotion program in future Phsyical Activity Reports, please send the following information:

Cardiovascular Disease Prevention Initiative • Division of Public Health • Georgia Department of Human Resources
2 Peachtree Street, 16th Floor • Atlanta, GA 30303

Name of Program:

Sponsoring Organization (if any):

Address:

Phone number:

e-mail:

Target Group:

Program Goal:

Description:

The Guide to Community Preventive Services *(Community Guide)* provides recommendations regarding population-based interventions to promote health and to prevent disease, injury, disability, and premature death. Recommendations are based on systematic reviews of the scientific literature (see Am J Prev Med 2000;18 (1S):18-26). The *Community Guide* is a federally sponsored initiative and is part of a family of federal initiatives including Healthy People 2010 and the Guide to Clinical Preventive Services. More information about the *Community Guide* (including links to a variety of resources) is available at http://www.thecommunityguide.org. Recommendations about physical activity programs from the *Community Guide* are scheduled for release in September 2001. Preliminary recommendations from the *Community Guide* are these:

TYPE OF INTERVENTION TO PROMOTE PHYSICAL ACTIVITY	INTERVENTION DEFINITION
STRONGLY RECOMMENDED	
Community-wide education	Multi-component community-wide campaigns designed to increase knowledge, influence attitudes and beliefs, and change behavior related to physical activity.
School-based physical education	Modified curricula and policies to increase the amount of time students are moderately or vigorously active while in PE class, without necessarily increasing the amount of class time.
Non-family social support	Building, strengthening, and maintaining social networks outside of the family, e.g., workplace, to change physical activity behavior.
Individually-adapted health behavior change	Teaching individuals to incorporate physical activity into their daily routines through goal setting and self-monitoring, building social support, behavioral reinforcement, structured problem solving, and relapse prevention.
Creation and/or enhanced access to places for physical activity	Building places for physical activity, e.g., bicycle trails, walking trails, or fitness centers; reducing barriers to existing places e.g., reducing fees or providing time for employees to use facilities during the workday.
RECOMMENDED	
"Point-of-decision" prompts	Placement of highly visible health messages where the viewer has an option between a more healthy and less healthy option e.g., signs placed at the base of elevators or escalators prompting people to take the stairs.
INSUFFICIENT EVIDENCE*	
Classroom-based school health education focused on information provision	Providing children in the classroom setting with information about health risks and behavioral risk factors related to physical activity.
Mass media (only) campaigns	Single component interventions that use mass media to increase knowledge, influence attitudes and beliefs, and change behavior related to physical activity.
Health education with TV/Video game turnoff component	A subset of classroom-based health education classes that specifically emphasize decreasing the amount of time children spend watching television and playing video games.
College-age physical education/health education	Physical and health education classes adapted to the needs and lifestyles of college students with the aim of setting long-term behavioral patterns during the transition to adulthood.
Family-based social support	Using the family support structure, specifically children and their families, to reinforce patterns and norms that support greater levels of physical activity. Expected Summer 2001
Transportation policy and infrastructure changes to promote non-motorized transit	Not yet defined
Urban planning approaches-zoning and land use	Not yet defined

* Insufficient evidence does not mean ineffective, it means more research is needed.

Appendix I

Physical Activity-Related Objectives from Healthy People 2010 and Cur rent Status of Objectives in Georgia

Healthy People 2010 Objectives	Status of Objectives in Georgia
22-1 Reduce the proportion of adults who engage in no leisure-time physical activity. Target: 20 percent	27% of Georgia adults engage in no leisure-time physical activity
22-2 Increase the proportion of adults who engage regularly, preferably daily, in physical activity for at least 30 minutes per day. Target: 30 percent	18% exercise regularly for 30 minutes per day more than 5 days a week 11% fulfill criteria for this objective only 7% fulfill criteria for this objective in addition to fulfilling criteria for 22-3
22-3 Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion. Target: 30 percent	13% engage in activity in which they are vigorously active more than 20 minutes per day, 3 days a week or more 6% fulfill criteria for this objective only 7% fulfill criteria for this objective in addition to fulfilling criteria for 22-2
22-4 Increase the proportion of adults who perform physical activities that enhance and maintain muscular strength and endurance. Target: 30 percent	28% engage in strength enhancing activities for at least two days a week[1]
22-5 Increase the proportion of adults who perform physical activities that enhance and maintain flexibility. Target: 43 percent	Data have not been collected in Georgia.
22-6 Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days. Target: 35 percent	Data are statistically unreliable.[2]
22-7 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion. Target: 85 percent	Data are statistically unreliable.[2]
22-8 Increase the proportion of the Nation's public and private schools that require daily physical education for all students. Target: 25% for middle and junior high schools 5% for high schools	Physical Education (PE) is no longer mandatory by law for middle schools. The Sate Board of Education has, by rule, made PE and health mandatory for grades K-5 for 90 hours of instruction per year. Each school containing any grade 6-12 must make available instruction in health and physical education. One course, equivalent to 150 hours of instruction, in health and PE is still required for graduation from high school.

22-9 Increase the proportion of adolescents (grades 9-12) who participate in daily school physical education. Target: 50 percent	Data are statistically unreliable.[2]
22-10 Increase the proportion of adolescents who spend at least 50 percent of school physical education class time being physically active. Target: 50 percent	Data are statistically unreliable.[2]
22-11 Increase the proportion of adolescents who view television 2 or fewer hours on a school day. Target: 75 percent	Data have not been collected in Georgia.
22-12 (Developmental) Increase the proportion of the Nation's public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours (that is, before and after the school day, on weekends, and during summer and other vacations).	Data have not been analyzed.
22-13 Increase the proportion of worksites offering employer-sponsored physical activity and fitness programs. Target: 75 percent	Data collection is in progress.
22-14 a. Increase the proportion of trips one mile or less. Target: 25 percent for adults aged 18 years and older b. Increase the proportion of trips to school one mile or less made by walking. Target: 50 percent for children and adolescents aged 5 to 15 years	a. Data have not been collected in Georgia. b. 19% of Georgia children who live a mile or less from school, walk to school[3]
22-15 a. Increase the proportion of trips five miles or less made by bicycling. Target: 2 percent for adults aged 18 years and older b. Increase the proportion of trips to school two miles or less made by bicycling. Target: 5 percent for children adolescents aged 5 to 15 years	a. Data have not been collected in Georgia. b. Data have not been collected in Georgia.

[1]Taken from State added question in 1999 BRFSS
[2]Data on this information is collected with the Georgia Youth Risk Behavior Survey (YRBS). The YRBS, conducted every odd year, samples 53 high schools and 53 middle schools. However, Georgia has a low participation rate making the information statistically unreliable.
[3]Data source: Data were collected as part of the Georgia Asthma Survey, a telephone survey of Georgia households with children conducted in 1999. Respondents in households which had a child between the ages of 5 and 17 years old, were asked the following two questions related to walking to school: 1) How does {child name} get to school most days of the week? 2) About how many miles is it from where you live to the school {child name} attends? The sample is analyzed using the same weighting system as the Georgia BRFSS.

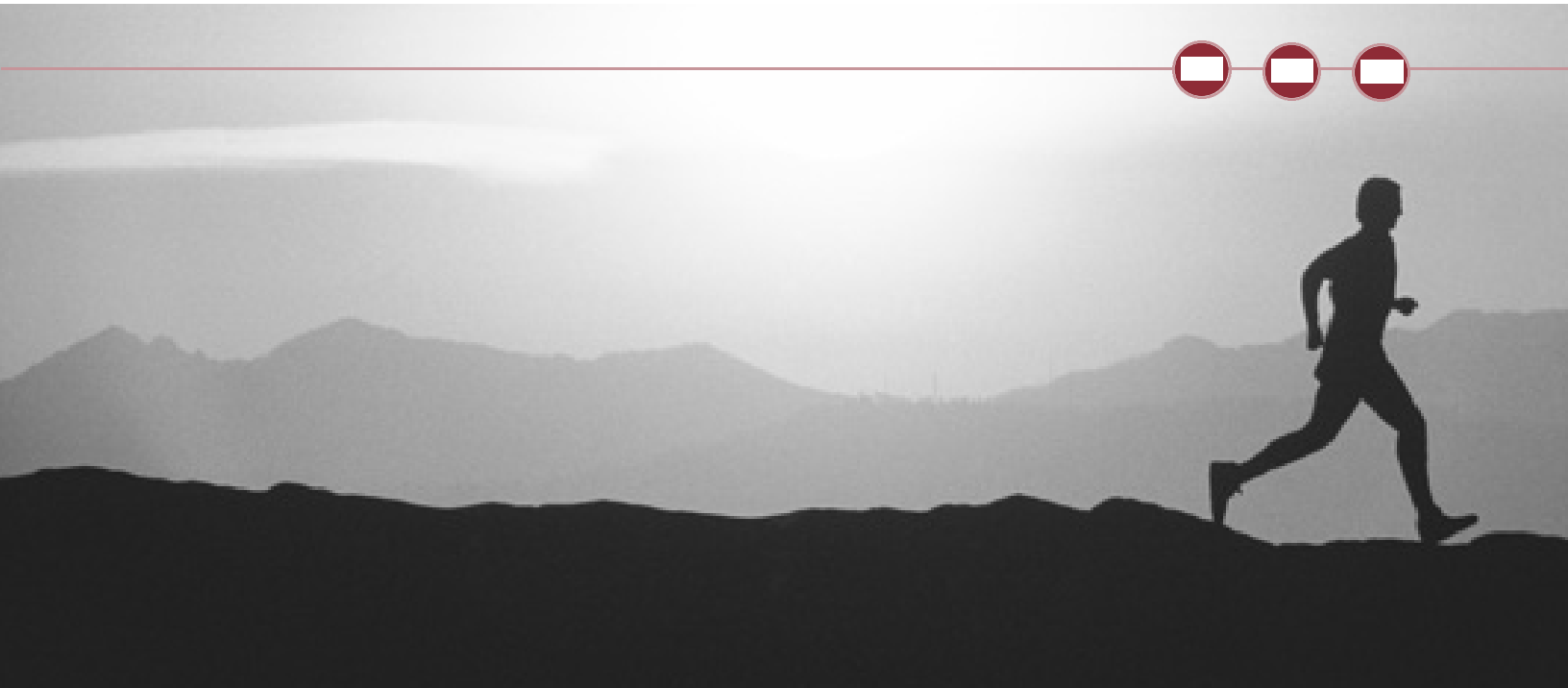
Appendix II

Percent of adults (18+ years) by activity category and county , Georgia 1994, 1996, 1998, 1999 combined.

County	Regularly Active	Irregularly Active	Inactive	County	Regularly Active	Irregularly Active	Inactive
Georgia	24	49	27	Douglas	29	44	27
Appling	21	34	45	Early	34	32	34
Atkinson	20	37	43	Echols	33	29	38
Bacon	16	39	45	Effingham	25	42	33
Baker	38	31	31	Elbert	28	42	30
Baldwin	26	38	36	Emanuel	23	50	27
Banks	24	41	35	Evans	34	47	19
Barrow	24	48	28	Fannin	15	42	44
Bartow	29	45	27	Fayette	24	46	30
Ben Hill	18	43	39	Floyd	22	33	46
Berrien	27	38	36	Forsyth	23	50	27
Bibb	26	42	32	Franklin	30	41	29
Bleckley	26	38	36	Fulton	26	48	26
Brantly	12	35	53	Gilmer	16	39	45
Brooks	38	24	38	Glascock	29	35	37
Bryan	29	39	33	Glynn	22	31	47
Bulloch	27	47	26	Gordon	20	42	38
Burke	25	41	33	Grady	29	31	41
Butts	20	41	38	Green	31	39	30
Calhoun	30	35	35	Gwinnett	20	48	32
Camden	12	37	51	Habersham	26	37	37
Candler	27	37	36	Hall	21	46	34
Carroll	26	46	28	Hancock	30	29	41
Catoosa	15	36	49	Haralson	24	49	28
Charlton	12	37	51	Harris	28	39	33
Chatham	22	36	43	Hart	28	42	29
Chattahoochee	32	34	34	Heard	11	57	32
Chattooga	25	31	44	Henry	28	42	30
Cherokee	28	47	25	Houston	25	43	32
Clarke	35	46	19	Irwin	22	38	39
Clay	34	29	37	Jackson	33	46	21
Clayton	22	40	38	Jasper	22	40	39
Clinch	24	36	40	Jeff Davis	20	36	44
Cobb	32	42	26	Jefferson	25	40	35
Coffee	23	38	39	Jenkins	27	43	30
Colquitt	22	37	41	Johnson	26	39	34
Columbia	27	41	32	Jones	26	38	36
Cook	31	33	35	Lamar	18	36	46
Coweta	24	48	29	Lanier	25	35	40
Crawford	21	43	35	Laurens	28	30	42
Crisp	26	40	34	Lee	30	35	36
Dade	21	37	42	Liberty	25	36	39
Dawson	18	51	31	Lincoln	24	39	38
Decatur	31	30	40	Long	24	29	47
DeKalb	33	42	25	Lowndes	26	35	39
Dodge	24	39	37	Lumpkin	10	45	45
Dooly	31	42	27	McDuffie	27	41	32
Dougherty	29	35	36	McIntosh	23	29	47

* Percent total for some counties may not add up to 100 due to rounding

County	Regularly Active	Irregularly Active	Inactive	County	Regularly Active	Irregularly Active	Inactive
Macon	24	39	37	Stewart	29	33	38
Madison	31	43	26	Sumter	25	39	36
Marion	31	33	36	Talbot	30	32	38
Meriwether	15	42	43	Taliaferro	30	38	32
Miller	33	29	38	Tattnall	28	24	48
Mitchell	25	31	44	Taylor	26	38	36
Monroe	22	42	36	Telfair	23	41	36
Montgomery	20	45	35	Terrell	30	35	35
Morgan	19	35	45	Thomas	29	32	39
Murray	17	38	44	Tift	28	37	35
Muscogee	33	33	34	Toombs	21	38	40
Newton	17	48	35	Towns	20	36	43
Oconee	35	46	19	Truetlen	22	44	34
Oglethorpe	32	43	25	Troup	15	51	34
Paulding	32	40	28	Turner	26	41	33
Peach	25	43	32	Twiggs	25	39	35
Pickens	17	55	28	Union	21	37	42
Pierce	15	34	51	Upson	24	40	36
Pike	18	43	38	Walker	22	34	45
Polk	27	41	32	Walton	19	49	33
Pulaski	25	42	33	Ware	16	39	45
Putnum	28	42	30	Warren	27	36	37
Quitman	32	32	35	Washington	27	34	38
Rabun	22	33	45	Wayne	21	31	48
Randolph	32	33	35	Webster	31	34	35
Richmond	28	39	32	Wheeler	21	40	39
Rockdale	25	45	30	White	16	33	51
Schley	24	36	40	Whitfield	16	34	50
Screven	25	41	34	Wilcox	22	41	37
Seminole	29	30	41	Wilkes	28	41	30
Spalding	19	40	40	Wilkinson	26	31	42
Stephens	24	37	39	Worth	27	38	35



Appendix III

Percent of adults (18 years) by activity category and demographic groups, Georgia, 1999.

County	Regularly Active	Irregularly Active	Inactive
Age			
<25	27	63	10
25-44	25	52	22
45-54	24	48	28
55-64	23	41	36
65+	19	38	43
Gender			
Men	26	49	25
Women	23	50	28
Race/Ethnicity			
Non-Hispanic Whites	24	50	26
Non-Hispanic Blacks	23	50	27
Other	29	42	30
Education			
< 8 years	8	38	55
9-11 years	18	47	35
HS graduate	22	46	32
Some college	25	54	22
College graduate	31	52	16
Income			
<$15000	19	40	40
$15,000-$34,999	22	48	30
$35,000-$74,999	24	54	22
$75,000+	36	48	15
Marital Status			
Married	24	49	27
Divorced/separated	23	46	31
Widowed	19	35	46
Never married	29	54	17
Employment Status			
Employed	23	53	23
Unemployed	27	51	21
Homemaker	27	46	26
Student	39	56	5
Retired	24	37	39
Place of Residence			
Urban	25	50	24
Rural	22	47	31
By year			
1984	31	52	17
1985	23	53	24
1986	21	52	27
1987	22	45	33
1988	22	46	32
1989	21	43	37
1990	21	42	37
1991	17	43	40
1992	19	42	40
1993	23	41	36
1994	27	40	33
1995	-	-	42
1996	15	33	51
1997	-	-	-
1998	25	45	30
1999	24	49	27

* Percent total for some counties may not add up to 100 due to rounding

Appendix IV.

Details about the Behavioral Risk Factor Surveillance System (BRFSS)

The Georgia Behavioral Risk Factor Surveillance System (BRFSS) data were analyzed to assess the physical activity patterns among adult Georgians. The BRFSS is a survey conducted annually by the Division of Public Health, Georgia Department of Human Resources. Each month, approximately 190 randomly selected adults 18 years of age and older in Georgia are interviewed by telephone using standardized methods and questionnaires. The BRFSS covers a wide range of health behaviors including seat belt use, high blood pressure, and physical activity, providing estimates of the prevalence of these risk factors for injury and disease. BRFSS data have been collected in Georgia since 1984.

In 1999 a total of 2273 adults in Georgia were included in the BRFSS. All estimates presented in this report are based on the 1999 survey except for the analysis of time trends, which uses data from 1984 through 1999 and the county specific estimates which use data from 1994, 1996, 1998 and 1999. The trend analysis is not age-adjusted to a standard population. Because the number of people of races other than white or black was too small to give a stable estimate, the analysis by race is limited to white and black.

County Specific estimates were obtained by including, if necessary, responses from participants in adjacent counties. If a county had fewer than 200 respondents, in 1994, 1996, 1998 and 1999 combined, respondents in all bordering counties were included as if they were residents of the county of interest. If there were still fewer than 200 respondents after adding one concentric ring of counties, a second or third concentric ring was added. Only Georgia residents were used. Nine counties did not need a ring to reach the required sample size. Seventy-eight counties needed one ring, while 70 counties required two rings and two counties needed three rings. The county specific prevalence estimates are weighted according to state demographic information.

Information about the quality and quantity of a respondent's physical activity was obtained from a series of questions regarding exercise, recreational activity, or physical activities away from the job. The BRFSS questions about physical activity begin by asking, "During the past month, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?" If they answer yes, information is then obtained about the type, frequency, and duration of the activity. Respondents are then asked about a second activity in an identical manner. The actual questions regarding physical activity are listed on the next page.

Three levels of physical activity among Georgians were defined in this report based on the number of days per week the respondents reported performing the activity and the average number of minutes the respondent was active each time they performed the activity. For individuals who reported two activities, it was assumed that the two activities were performed on different days. Respondents were considered regularly active if a) they reported activity on 5 or more days per week and accumulated 150 minutes or more of moderate or vigorous physical activity per week, or b) they reported vigorous physical activity on 3 or more days per week with 20 minutes or more per session. Respondents were considered irregularly active if they reported doing some leisure-time physical activity but were not regularly active. Respondents were considered inactive if they reported no non-occupational activity during the past 30 days.

BRFSS activities by category

Walking	Walking
Indoor Conditioning Activities	Aerobics class, boxing, calisthenics, dancing, aerobics/ballet, health club exercise, home exercise, judo/karate, rope skipping, stair climbing, weight lifting, bicycling machine exercise, rowing machine exercise
Recreational Activities	Backpacking, bicycling for pleasure, bowling, golf, hiking cross-country, horseback riding, hunting large game, - deer, elk, mountain climbing, skating – ice or roller, sledding, tobogganing, snow shoeing, snow skiing, table tennis, other
Home Maintenance Activities	Carpentry, gardening (spading, weeding, digging, filling), mowing lawn, painting/papering house, raking lawn, snow shoveling by hand, snow blowing
Jogging	Jogging, running
Team Sports	Basketball, soccer, softball, touch football, volleyball
Water Activities	Boating (canoeing, rowing, sailing for pleasure) camping, canoeing/rowing in competition, fishing from riverbank or boat, scuba diving, snorkeling, stream fishing in waders, surfing, swimming laps, water skiing
Racquet Sports	Badminton, handball, paddle ball, racquetball, squash, tennis

Behavioral Risk Factor Surveillance System (BRFSS)
Questions on Exercise, 1984-1999

The next few questions are about exercise, recreation or physical activities other than your regular job duties.

1. During the past month, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking exercise?
   a. Yes
   b. No, Go to Q11
   Don't know/Not sure, Go to Q11
   Refused, Go to Q11

2. What type of physical activity did you spend the most time doing during the past month?
   Activity (specify): _____ __ __
   See coding list A
   Refused, Go to Q6

Ask Q3 only if answer to Q2 is running, jogging, walking, or swimming. All others, go to Q4.

3. How far did you usually walk/run/jog/swim?
(See coding list B if response is not in miles and tenths)
   Miles and tenths __ __.__
   Don't know/Not sure 7 7 7
   Refused 9 9 9

4. How many times per week or per month did you take part in this activity during the past month?
   a. Times per week __ __
   b. Times per month __ __
   Don't know/Not sure
   Refused

5. And when you took part in this activity, for how many minutes or hours did you usually keep at it?

   Hours and minutes __:__ __
   Don't know/Not sure
   Refused

6. Was there another physical activity or exercise that you participated in during the last month?
   a. Yes
   b. No, Go to Q11
   Don't know/Not sure, Go to Q11
   Refused, Go to Q11

7. What other type of physical activity gave you the next most exercise during the past month?
   Activity (specify): _____ __ __
   See coding list A
   Refused, Go to Q6

Ask Q8 only if answer to Q7 is running, jogging, walking, or swimming. All others, go to Q11.

8. How far did you usually walk/run/jog/swim?
(See coding list B if response is not in miles and tenths)
   Miles and tenths __ __.__
   Don't know/Not sure 7 7 7
   Refused 9 9 9

9. How many times per week or per month did you take part in this activity during the past month?
   a. Times per week __ __
   b. Times per month __ __
   Don't know/Not sure
   Refused

10. And when you took part in this activity, for how many minutes or hours did you usually keep at it?

   Hours and minutes __:__ __
   Don't know/Not sure
   Refused

Appendix V

Details about estimating the burden of inactivity and the benefits of activity

Population Attributable Risk: Population attributable risk (PAR) is an estimate of the proportion of deaths or other measures of disease burden caused by a particular risk factor. The PAR represents the proportion of disease in a population that could be eliminated if the exposure were removed from the population. For example, the PAR of inactivity is the fraction of heart disease deaths that would not occur if everyone were regularly active. As a formula, it is expressed:

$$(1)\ PAR = \frac{\text{\# of Heart Disease Deaths (actual)} - \text{\# of Heart Disease Deaths (if all regularly active)}}{\text{\# of Heart Disease Deaths (actual)}}$$

Because the value for "# of Heart Disease Deaths (if all regularly active)" cannot be directly measured, PAR is usually calculated using another formula that requires the prevalence of the risk factor and the relative risk of those with the risk factor compared to those without the risk factor.

$$(2)\ PAR = \frac{\hat{A}P_{exp(i)} * (RR_i - 1)}{1 + \hat{A}[P_{exp(i)} * (RR_i - 1)]} \times 100$$

In this equation P_{exp} is the prevalence of the exposure, RR is the relative risk, and (i) is the level of exposure to the risk factor if there is more than one level of the risk factor. The categories of activity used in this report provide two levels of risk, one level for those who are inactive and one level for those who are irregularly active. It is important to note that even if everyone were regularly active, the diseases of interest, such as heart disease or diabetes, would not be completely eliminated from the population. The rate of disease would be determined by the prevalence of other causal factors.

Calculating the PAR using formula (2) (above) assumes that other risk factors, known or unknown, are unassociated with the risk factor of interest. This assumption often does not hold. When it does not, the calculated PAR will be either higher or lower than the actual number. A second assumption of the PAR calculated with formula (2) is that the prevalences of the other risk factors would not change if the risk factor of interest disappeared. These assumptions and others make the PAR an imperfect estimate of the proportion of disease caused by a specific risk factor. Nevertheless, the PAR provides a useful approximation of the potential gains from reducing the prevalence of various risk factors, including inactivity.

Population event prevented: Population events prevented (PEP) is an estimate of the proportion of deaths or other measures of disease burden prevented by a protective exposure. The PEP represents the additional proportion of disease in a population that would occur if the protective exposure were removed from the population. For example, the PEP of activity is the additional fraction of heart disease deaths that would occur if everyone were inactive. The formulas for PEP corresponding to formula (1) and formula (2) are:

$$(3)\ PEP = \frac{\text{\# of Heart Disease Deaths (if all inactive)} - \text{\# of Heart Disease Deaths (actual)}}{\text{\# of Heart Disease Deaths (actual)}}$$

$$(4)\ PEP = \frac{(RR_s - 1) - (\hat{A}P_{exp(i)} * (RR_i - 1))}{1 + \hat{A}[P_{exp(i)} * (RR_{(i)} - 1)]} \times 100$$

RR_s is the relative risk of the sedentary group with respect to the regularly active, P_{exp} is the prevalence of exposure, RR is the relative risk and (i) is the level of exposure to the risk factor if there is more than one.

Conditions selected for PAR and PEP analysis: Physical activity is known to reduce the risk for heart disease, high blood pressure, colon cancer, non-insulin dependent diabetes mellitus, and helps maintain proper body weight. Physical activity has also been shown to help maintain normal muscle strength, joint structure, and joint function which also prevents and reduces the of risk falling, thereby not only reducing the risk of hip fracture but also

enabling older adults to remain functionally independent for longer periods of time. Evidence of a beneficial effect of regular physical activity on the incidence of stroke recently has, in our opinion become sufficient.[1,2,3] There is also agreement that regular physical activity reduces the symptoms of depression and anxiety, and improves overall quality of life.[4] More research is needed for confirmation of the effects of physical activity on other conditions such as cholecystitis (gall bladder inflammation, usually from gallstones), other cancers, and also on suicide.

The physical activity related PAR and PEP estimates have been calculated for heart disease, hypertension, colon cancer, non-insulin dependent diabetes mellitus and stroke. It should be noted that stroke is a heterogeneous disorder with several different pathologies. The benefits on stroke brought about by physical activity presumably occur for the most prevalent subtype of stroke in the United States, atherothrombotic stroke. Atherothrombotic stroke only comprises approximately 61% of all stroke cases.[5] Also calculated, were the PAR and PEP estimates for a sixth condition consisting of osteoporosis plus hospitalizations and hospital discharges for hip fractures among individuals 60 years of age or greater. These conditions were selected because there is consensus about the independent beneficial effect of regular physical activity on their incidence and because RR estimates for each are available in the literature. Other established benefits, such as improved quality of life, are currently impossible to quantify in easily understood terms. Although mental health benefits are among the most important benefits of regular physical activity, this report did attempt to quantify them.

Relative risks for the selected conditions: The summary RR is considered the risk of inactive persons (BRFSS definition) compared to regularly active persons (BRFSS definition). For five of the six selected conditions, estimates for the relative risk (RR) were obtained from a recent article on the costs of inactivity.[6] The estimated relative risk for all stroke (without regard to subtype) was taken from a review of five recent prospective studies on the relationship of stroke and physical activity.[7] The geometrical mean of each summary RR and 1 was assigned for irregularly active persons.

Hospitalizations and hospital charges: The number of deaths, hospitalizations, and hospital charges for each of the six conditions in Georgia in 1999 was obtained from Georgia Hospital Discharge Survey data. The following ICD-9 codes were used: Ischemic Heart Disease, 410-414; Hypertension (High Blood Pressure), 401-404; Stroke, 430-438; Diabetes, 250; Colon Cancer, 153; Osteoporosis, 733 for both mortality and hospital discharge data and, for persons 60 years of age or more, 820 (fracture of the neck of the femur) from hospital discharge survey only.

Deaths: The number of deaths in Georgia in 1999 due to each of the six conditions was obtained from Georgia Vital Statistics data. The following ICD-10 codes were used: Ischemic Heart Disease, I20-I25; Hypertension (High Blood Pressure), I10-I13; Stroke, I60-I69; Diabetes, E10-E14; Colon Cancer, C18; Osteoporosis, M80-M81.

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[7]Wannamethee SG, Shaper AG. Physical activity and the prevention of stroke. Journal of Cardiovascular Risk. 1999; 6:213-216.

Population attributable risk (PAR) of insufficient physical activity for heart disease, high blood pressure, stroke, colon cancer, diabetes, and osteoporosis and falls with fractures

Activity Category	P_{exp}	Heart Disease		High Blood Pressure		Stroke		Colon Cancer		Diabetes		Osteoporosis /Falls with Fractures	
		RR	PAR	RR	PAR	RR	PAR	RR	PAR	RR	PAR	RR	PAR
Inactive	.27	2.0	18%	1.5	10%	2.0	18%	2.0	18%	1.5	10%	2.0	18%
Irregularly Active	.49	1.4	14%	1.2	8%	1.4	14%	1.4	14%	1.2	8%	1.4	14%
Regularly Active	.24	1.0	---	1.0	---	1.0	---	1.0	---	2.0	---	1.0	---
Total PAR			32%		18%		32%		32%	1.0	18%		32%

PAR= Population Attributable Risk, P_{exp}= prevalence of the exposure. RR= relative risk

Glossary

Age adjustment - The application of observed age-specific rates to a standard age distribution to eliminate differences in rate estimates due to differences in the populations' age distributions. The U.S. standard population 2000 is the standard distribution used in this report.

Atherothrombotic stroke - Damage or destruction of brain cells due to reduced blood supply because of atherosclerosis.

Behavioral Risk Factor Surveillance System (BRFSS) - The Georgia BRFSS is an ongoing population-based public health surveillance system that collects information regarding health-risk behaviors through a telephone survey of a representative sample of the state's civilian, non-institutionalized adult population.

Confidence intervals - The computed interval with a given probability, e.g., 95%, that the true value of a variable such as a mean, proportion, or rate is contained within the interval.

Environment - Physical and sociocultural surroundings that influence behavior.

Flexibility - The ability to move a joint through the full range of motion without discomfort or pain.

Healthy People 2010 - A national health promotion and disease prevention initiative which aims to increase the quality and years of healthy life and to eliminate health disparities.

High blood pressure - Blood pressure is measured as systolic (pressure of the blood in the arteries when the heart beats) and diastolic (pressure between heartbeats). High blood pressure, or hypertension, is generally considered to be greater than or equal to 140 systolic and 90 diastolic (measured in millimeters of mercury).

Inactive - Persons who report no non-occupational physical activity in the past 30 days.

Irregularly active - Persons who report some moderate or vigorous activity, but are not regularly active.

Intervention - A focused set of activities designed to reduce a risk factor or increase a protective factor.

Ischemic Heart Disease - Heart disease caused by narrowing or hardening of the arterial walls. Ischemic heart disease is simply referred to as heart disease in this report.

Muscular endurance - The ability of the muscle to perform repetitive contractions over a prolonged period of time.

Muscular strength - The amount of force that a muscle can exert.

Non-Insulin Dependent Diabetes Mellitus Type II (NIDDM) - The form of diabetes mellitus characterized by gradual onset, usually in obese persons over the age of 40. Diabetes mellitus is a chronic disorder of metabolism affecting the way the body uses digested food for growth and energy. NIDDM is simply referred to as diabetes in Tables 3-1 and 3-2 of this report.

Physical activity - Bodily movement that is produced by the contraction of skeletal muscle and that results in energy expenditure.

Physical fitness - A set of attributes involving performance-related and health-related components that relate to a person's ability to perform physical activity. Examples of performance-related components of fitness include agility, balance, coordination, power, and speed. Examples of health-related components of physical fitness include body composition, cardiorespiratory function, flexibility, and muscular strength.

Policies - Organizational statements or rules that are meant to influence behavior.

Population Attributable Risk (PAR) - An estimate of the proportion of deaths or other measures of disease burden caused by a particular risk factor. The PAR represents the reduction in incidence that would be achieved if exposure to a particular risk factor could be completely removed from a population.

Population Events Prevented (PEP) - An estimate of the proportion of deaths or other measures of disease burden prevented by a protective exposure. The PEP represents the additional proportion of disease in a population that would occur if the protective exposure were removed from the population.

Program - A set of complementary and reinforcing interventions.

Prevalence - An estimate of how many people in a defined population have a specific disease at a given point in time.

Regularly active - Persons who report being physically active for 5 or more days a week for total time of 150 minutes or more or persons who report 3 or more days a week of vigorous activity for 20 minutes or more each session.

Relative Risk (RR) - A measure of the association of a risk factor to disease. RR is the ratio of the risk of disease or death among the exposed to the risk among the unexposed.

Sedentary - A lifestyle characteristic of persons who are relatively inactive.

Statistical trend - The tendency to move in a consistent direction that is unlikely due to chance. Specifically, a quantitative assessment indicates a 95% or more probability that the trend is not due to chance.

Stroke - Stroke is a cardiovascular disease that occurs when the brain is damaged because a blood vessel bringing oxygen and nutrients to the brain ruptures or is clogged by an atheromatous plaque or some other particle.

Youth Risk Behavior Survey (YRBS) - The Georgia YRBS is an ongoing school-based surveillance system that monitors health-risk behaviors among youth and young adults. The YRBS is conducted nationally by CDC and at the state level by education agencies.

Vigorous physical activity - Rhythmic, repetitive physical activities that use large muscle groups at 70 percent or more of maximum heart rate for age. An exercise heart rate of 70 percent of maximum heart rate for age is about 60 percent of maximal cardiorespiratory capacity and is sufficient for cardiorespiratory conditioning. Maximum heart rate equals roughly 220 beats per minutes minus age. Examples of vigorous physical activities include jogging/running, lap swimming, cycling, aerobic dancing, skating, rowing, jumping rope, cross-country skiing, hiking/backpacking, racquet sports, and competitive group sports such as soccer and basketball.